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# Contributions to the knowledge of Neotropical lycaenid butterflies: Polyommatainae (Lepidoptera: Lycaenidae)

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**ABSTRACT.** We present data on the geographical, spatial and temporal distribution of 23 species of polyommataine lycaenids based on 162 specimens collected during our field work in recent years. General information on the geographical, spatial and temporal distribution of the species-group taxa are also given by compiling the data published in the literature.

**Key words:** entomology, distribution, geographical, spatial, temporal, Neotropical Region, Polyommatainae, Lycaenidae.

## INTRODUCTION

There are very little recently published data on the geographical, spatial and temporal distribution of neotropical lycaenid butterflies. The present paper seeks to remedy this deficiency with data in respect of the subfamily Polyommatainae, generally known as the Blues. The Blues comprise approximately 10% percent of the entire family Lycaenidae in the Neotropical Region, taking an intermediate position between Theclinae (more than 90%) and Lycaeninae (less then 0.5 %).

Taxa are listed in alphabetical order according to their present generic placements, followed by their species names. All the species names are taken in the

sense of Recommendation 51G of the INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE (1999). Then the reference to the original description (with type data) and the current combination is given. Additionally, at least one reference to colour photographic documentation of the taxon discussed is given in order to help a reader not familiar with the group to identify the species.

The material examined is currently deposited in the Zoological Museum of the Jagiellonian University (Krakow) and was primarily collected by Polish entomologists (Rafał GARLACZ, Tomasz PYRCZ and Janusz WOJTUSIAK). Data are listed in alphabetical order beginning with country name, followed by larger political units (departments, estados, provinces) and particular localities. Under the remarks, general distributional data are presented as a result of the compilation of recent faunistic and taxonomic literature (BÁLINT 1993, JOHNSON 1995). For geographical distribution we combine large-scale political (country, department) and geographic terminology (Amazonian Lowland, Andes and Pacific coast). For spatial distributions we apply generalised distinct grades (low elevation means the zone from the sea level to 1000 m, moderate elevation the zone from 1000-2500 m, high elevation the zone 2500 to 4000 and very high elevation the zone above 4000 m), and for temporal distribution, when specified, we use month names.

#### LIST OF SPECIES

##### ***Echinargus huntingtoni* RINDGE & COMSTOCK, 1953**

*Echinargus huntingtoni* RINDGE & COMSTOCK, 1953: 99; AMNH holotype male, TRINIDAD: "Hololo Mountain Road, St. Ann's" (examined).

*Echinargus huntingtoni* RINDGE & COMSTOCK; D'ABRERA 1995: 1256, 1257 (figs "E. huntingtoni").

#### MATERIAL EXAMINED (2 specimens)

VENEZUELA – Distrito Federal: P. N. Avila, Piedra Azul, V. 1987 (male, female).

#### REMARKS

Known exclusively from coastal NE South America and the adjoining islands (like St. Anna) from sea level to moderate elevation throughout the year.

##### ***Echinargus martha* (DOGNIN, 1887) NABOKOV, 1946**

*Lycaena martha* DOGNIN, 1887: 190, fig. 5 (syntype wing dorsum, ventrum); BMNH 265587 lectotype male (BÁLINT 1993: 16) ECUADOR: "Environs de Loja" (examined).

*Echinargus martha* (DOGNIN) NABOKOV, 1946: 193.

*Echinargus martha* (DOGNIN); D'ABRERA 1995: 1257, figs "E. martha" (male and female wing dorsa, male ventrum).

## MATERIAL EXAMINED (12 specimens)

ECUADOR – Bolívar: Balzapamba, 2000 m, 05.IX.2004. (female); Pichincha: Pacto, Río Mashpi, VI.2004. (male). PERU – Amazonas: Molinopampa, Tingo-Ocol, 2400-2500 m, 28.VI.1998 (7 males), Via Granada, 2980 m, 3.VII.1998 (female); Junín: Quebrada Morochillo, 1700 m, 18.IV.2003 (2 males).

## REMARKS

Known to occur in the Andes of southern Colombia, Ecuador and Peru at moderate to high elevations from March to September.

***Eldoradina cyanea* (BALLETO, 1993) BÁLINT, 1995**

*Nabokovia* (*Eldoradina*) *cyanea* BALLETO, 1993: 242; BMNH 265561 holotype male, PERU: “Chosica” (examined).

*Eldoradina cyanea* (BALLETO) BÁLINT 1995: 4.

? *Gen. ♂ sp. Balint M/S*; D’ABRERA 1995: 1254, figs “?Gen. ? sp.” (holotype dorsum, paratype ventrum).

## MATERIAL EXAMINED (3 specimens)

PERU – Cajamarca: road Cajamarca-Aylambo, 3000-3100 m, 15.VI.1998. (3 males).

## REMARKS

Known to occur exclusively in the Andes of Peru, departments Ancash, Cajamarca and Lima, from moderate to high elevation throughout the year.

***Everes comyntas* (GODART, 1824) DYAR, 1903**

*Polyommatus comyntas* GODART, 1824: 660; MNHN syntype(s): “Amerique septentrionale” (types not yet located).

*Everes comyntas* (GODART) DYAR, 1903: 45.

*Everes comyntas* (GODART); D’ABRERA 1993: 472, 473 figs “E. comyntas”.

## MATERIAL EXAMINED (1 specimen)

ECUADOR – Carchi: Etsemaní, 1200 m, 29.VIII.2004. (female).

## REMARKS

Known to occur in Ecuador in the Pacific Coast and in the Andes from sea level and to moderate elevations, probably throughout the year. It seems to be a recent colonist, or introduced species, as we did not find any old records suggesting its previous presence in continental South America.

***Hemiargus hanno* (STOLL, 1780) HÜBNER, 1819**

*Papilio hanno* STOLL, 1780: 170, pl. 39, figs 2, 2b; syntype male(s): “Surinam and the Cape of Good Hope” (type material lost).

*Hemiargus hanno* (STOLL) HÜBNER, 1819: 91.

*Cyclargus hanno* (STOLL); D'ABRERA 1995: 1258, figs "C. hanno", (new combination).

**MATERIAL EXAMINED (7 specimens)**

PERU – Amazonas: Rodríguez de Mendoza, X. 2002. (male). VENEZUELA – Aragua: Rancho Grande, IX. 1985. (female); Mérida: Lagunillas, 1200 m, 30.XII.1991. (male), Quebrada la Cuesta, 2000 m, 09.X.1991. (male), La Mucuy, 12.IX.1980. (2 males). Miranda: P. N. Guatopo, Agua Blanca, IV. 1987. (male).

**REMARKS**

Known to occur in the entire Amazon Basin and adjoining territories (Cerrado, Eastern Andes) at sea level and moderate elevations throughout the year.

***Hemiargus ramon* (DOGNIN, 1887) NABOKOV, 1945**

*Lycaena ramon* DOGNIN, 1887: 189, fig. 4 (syntype wing dorsum, ventrum); BMNH 265594 lectotype male (BÁLINT 1993: 14) ECUADOR: "Loja" (examined) (illustrated in BÁLINT 1999a: 82, pl. 1, figs 8-10).

*Hemiargus ramon* (DOGNIN) NABOKOV, 1945: 26.

*Cyclargus ramon* (DOGNIN); D'ABRERA 1995: 1258, figs "C. ramon" (new combination).

**MATERIAL EXAMINED (17 specimens)**

PERU – Amazonas: Tingo-Chachapoyas, cca. 2400 m, 19.VI.1998 (female), Tingo Ocol, 2400-2500 m, 5.VII.1998 (3 males, 2 females), Vía Granada, 2980 m, 3.VII.1998 (4 males, 3 females); Cajamarca: road Cajamarca-Aylambo, 3000-3100 m, 15.VI.1998. (female), Llama-Tocac, 2550 m, 19.IV.2003 (male); Junín: San Pedro de Cajas, 3800 m, 24.I.2003. (female); Lima: Yaso, 1600 m, 29.IX.2002 (male).

**REMARKS**

Known to occur in the Pacific Coast and the Andes of Chile, Peru and Ecuador from the sea level to moderate elevations throughout the year.

***Itylos titicaca* (WEYMER, 1899) DRAUDT, 1921**

*Lycaena titicaca* WEYMER, 1890: 122; syntype male(s): "Bolivia" (MNHU lectotype male: "Sajama", designated by Bálint in BÁLINT & JOHNSON 1994: 57) (examined).

*Itylos titicaca* (WEYMER) DRAUDT, 1921: 821.

*Itylos titicaca* (STAUDINGER) (!); D'ABRERA 1995: 1254, 1255 figs "I. titicaca"

**MATERIAL EXAMINED (5 specimens)**

PERU – Junín: Lago de Junín, 5100 m, 5.XII.1975. (3 males, 2 females).

**REMARKS**

Known to occur in the Andes of Bolivia, north-west Argentina north-east Chile, Peru at high elevation throughout the year.

***Itylos mashenka* (BÁLINT, 1993) BÁLINT & LAMAS, 1996**

*Madeleinea mashenka* BÁLINT, 1993: 27, fig. 68; BMNH 265551 holotype male, PERU: “Tarma-Oroya” (examined).

*Itylos mashenka* (BÁLINT) BÁLINT & LAMAS, 1996: 141.

*Madeleinea mashenka* (BÁLINT); BÁLINT 1996: Pl K, figs 31 (“13”, holotype dorsum), 34 (“16” holotype ventrum).

**MATERIAL EXAMINED (1 specimen)**

PERU – Junín: Las Vegas, 3800m, 8.I.2003 (male).

**REMARKS**

Currently known only from the Andes of Peru, departments Junín and Lima at high and very high elevations, taken in January and July.

***Leptotes andicola* (GODMAN & SALVIN, 1891) BÁLINT & JOHNSON, 1995**

*Lycaena andicola* GODMAN & SALVIN, 1891: 104; BMNH lectotype male (BÁLINT & JOHNSON 1995: 5), ECUADOR: “Cayambe to Otavalo” (examined).

*Leptotes andicola* (GODMAN & SALVIN) BÁLINT & JOHNSON, 1995a: 5.

*Leptotes andicola* (GODMAN & SALVIN); D’ABRERA 1995: 1253, figs “L. andicola” (male and female wing dorsa, male ventrum).

**MATERIAL EXAMINED (22 specimens)**

ECUADOR – Carchi: Volcan Chiles, vía Tufiño Maldonado, 3100 m, 27.VIII.2004. (female); Imbabura: vía Buenos Aires, 1950-2900 m, 28.VIII.2004. (16 males); Pichincha: Pululahua volcano, 2300-2600 m, 11.II.2002. (male), Pito, 3200 m, 4.V.2002. (2 females); Tungurahua: Pelileo, 10.VIII.2000. (male, female).

**REMARKS**

Known to occur in the Andes of Colombia, Ecuador and north Peru at moderate elevations throughout the year.

***Leptotes callanga* (DYAR, 1913) CLENCH, 1964**

*Lycaena callanga* DYAR, 1913: 638; USNM lectotype (LAMAS in BÁLINT & JOHNSON 1995a: 7), PERU: “San Migual 6000 ft) (colour images examined).

*Leptotes callanga* (DYAR) CLENCH, 1964: 255.

*Leptotes callanga* (DYAR); D’ABRERA 1995: 1253, figs “L. callanga” (male and female wing dorsa, male ventrum).

**MATERIAL EXAMINED (6 specimens)**

PERU – Ancash: Chavín, 3300 m, 29.VII.2001. (2 males); Cuzco: Machu Picchu, II. 1987 (male, female); Huánuco: Illich, Shigsha-Ocopata road, 2650 m, 18.VIII.2002. (male); Junín: Chanchamayo, Matichacra, 2100 m, 28.III.2002. (male), Quebrada Shigsha, 2600 m, 5.X.2002. (2 males).

## REMARKS

Currently known to occur in the Andes of north-west Bolivia, south Colombia, Ecuador and Peru from moderate to high elevations throughout the year.

***Leptotes cassius* (CRAMER, 1775) DYAR, 1913**

*Papilio cassius* CRAMER, 1775: 36, "Surinam" pl. 23, figs C-D (female syntype wing dorsum, ventrum) (not extant).

*Leptotes cassius* (CRAMER) DYAR, 1913: 46 (as synonym of *L. theonus*).

*Leptotes cassius* (CRAMER); D'ABRERA 1995: 1252, 1253 figs "L. cassius" (male and female dorsa, male ventrum).

## MATERIAL EXAMINED (10 specimens).

VENEZUELA – Mérida: Lagunillas, 1200 m, 30.XII.1991. (2 males); Miranda: P. N. Guatopo, Agua Blanca, IV.1987. (4 males), Rancho Grande, IV.1987. (male, female); Distrito Federal: P. N. Avila, Los Venados, VII.1985. (2 males).

## REMARKS

Known to occur in the Amazon Basin and its adjacent territories (Atlantic Coast, Cerrado, Eastern Andes) at low and moderate elevations throughout the year.

***Leptotes delalande* BÁLINT & JOHNSON, 1995**

*Leptotes delalande* BÁLINT & JOHNSON, 1995a: 18, Pl. II, figs "L. delalande", BMNH holotype male, ECUADOR: "Chimbo, 1000'" (examined).

*Leptotes cassius* (CRAMER); D'ABRERA 1995: 1252, 1253 figs "L. cassius" (Colombia and Venezuela) (misidentification).

## MATERIAL EXAMINED (12 specimens).

ECUADOR – Bolivar: Balzapamba, 2000 m, 05.IX.2004. (6 males). PERU – Amazonas, Pomacochas, 2200-2400 m, VI.2002. (male, 2 females), Rodriguez de Mendoza, X. 2002. (female), ditto, cca.1400 m, I. 2003. (male); Huánuco: Ramospampa, Huánuco-Panao, 2850 m, 30.VIII.2002. (female).

## REMARKS

Known to occur in the mountains of Venezuela, the Andes of Colombia, Ecuador and Peru, from sea level to moderate elevations throughout the year.

***Leptotes lamasi* BÁLINT & JOHNSON, 1995**

*Leptotes lamasi* BÁLINT & JOHNSON, 1995a: 17, photoplate II figs "L. lamasi"; MUSM holotype male, PERU: "Amazonas, 11 km E Chachapoyas" (examined).

## MATERIAL EXAMINED (1 specimen).

PERU – Cuzco: Machu Picchu, 2000 m, II.1987 (male).

## REMARKS

Known to occur in the Andes of Peru from moderate to high elevations throughout the year.

***Nabokovia faga* (DOGNIN, 1895) HEMMING, 1960**

*Thecla faga* DOGNIN, 1895: 105, BMNH 265559 holotype male ECUADOR: “Loja” (examined) (illustrated in colour by BÁLINT 1999a: 82, pl. 1, figs 5-7).

*Nabokovia faga* (DOGNIN) HEMMING, 1960: 41.

*Nabokovia faga* (DOGNIN); D’ABRERA 1995: 1254, figs “N. faga”.

## MATERIAL EXAMINED (3 specimens).

PERU – Cajamarca: road Cajamarca-Aylambo, 3000-3100 m, 15.VI.1998. (male, 2 females).

## REMARKS

Known to occur in the Andes of southern Ecuador and northern Peru from high to very elevation throughout the year.

***Nabokovia cuzquenha* BÁLINT & LAMAS, 1996**

*Nabokovia cuzquenha* BÁLINT & LAMAS, 1996: 139, figs 13-14 (holotype wing dorsum, ventrum); MUSM holotype male, PERU: “Apurímac, Kuchiwa, Pachaconas” (examined).

*Nabokovia cuzquenha* BÁLINT & LAMAS; BÁLINT & JOHNSON 1997: 60, pl 1., fig 1. (paratype wing dorsum), pl. 2, fig 1. (paratype wing dorsum).

## MATERIAL EXAMINED (1 specimen).

PERU – Junín: Shigsha, 2650 m, 18.VIII.2002. (male).

## REMARKS

Hitherto known to occur in the Andes of Peru, departments Apurímac, Cuzco and Junín from high to very high elevations from March-April and July-August.

***Madeleinea cobaltana* BÁLINT & LAMAS, 1994**

*Madeleinea cobaltana* BÁLINT & LAMAS, 1994: 235, figs 5-6 (holotype wing dorsum, ventrum); MUSM holotype female, PERU: Junín, Ondores, 4080 m (examined).

*Madeleinea colbaltina* (!) (BALINT) (!); D’ABRERA 1995: 1256, 1257 figs “M. cobaltina”.

## MATERIAL EXAMINED (1 specimen).

PERU – Junín: Las Vegas, 4100 m, 18.I.2003. (male).

## REMARKS

Hitherto known to occur exclusively in the Andes of Peru, departments Junín and Lima, at very high elevations from January to February.

***Madeleinea koa* (DRUCE, 1876) BÁLINT, 1993**

*Lycaena koa* DRUCE, 1876: 239, pl 18, fig. 7 (syntype male wing dorsum, ventrum); BMNH 265558 lectotype male (BÁLINT 1993: 26), PERU: "Pozzuzo" (examined) (illustrated in colour by BÁLINT 1999a: 82, pl. 1, figs 12-14).  
*Madeleinea koa* (DRUCE) BÁLINT, 1993: 26.

**MATERIAL EXAMINED (21 specimens)**

ECUADOR – Azuay: Gualaceo, 2900 m, XI.2002. (female). PERU – Amazonas: Chachapoyas, Molinopampa-Granada, 3100 m, 12.VIII.2001. (male), Molinopampa, 2965 m, 29.VI.1998. (female), Pomacochas, Puente El Chido, 2200-2800 m, 8-10.VII.1998. (female), Road Leimebamba-Balsas, Abra de Barro Negro, 2550-3650 m, 1-15.XII.2001.(male), Tingo-Ocol, 2400-2500 m, 28.VI.1998. (male, 2 females), Via Granada, 3250-3400 m, 26.VIII.1998. (female); Cajamarca: Llama-Tocac, 2550 m, 19.IV.2003.(3 males, 2 females), Cajamarca-Aylambo, 3000-3100 m, 15.VI.1998. (male, 2 females), Sucre-Celendín, 2650-2350 m, 17.VI.1998. (male); Huánuco, Ramosapampa, Huánuco-Panao, 2850 m, 30.VIII.2002. (2 males), Illich, Shigsha-Ocopata road, 3000 m (female).

**REMARKS**

Known to occur in the Andes of southern Ecuador and northern Peru from high to very elevation throughout the year.

***Madeleinea lolita* BÁLINT, 1993**

*Madeleinea lolita* BÁLINT, 1993: 24, pl. 4a, fig. 67 (holotype wing dorsum, ventrum); BMNH 265549 holotype male, PERU: "Huambo" (examined) (illustrated in colour by BÁLINT 1996: pl. K, figs 32 ("14), 35 ("17).

**MATERIAL EXAMINED (7 males)**

PERU – Amazonas: Chachapoyas, Molinopampa, 2300 m, IX.2002. (male); Molinopampa, Tingo-Ocol, 2400-2500 m, 28.VI.1998 (5 males); Vía Granada, 3250-3400 m, 26.VIII.1998. (male).

**REMARKS**

Known to occur exclusively in the Andes of northern Peru, departments Amazonas and San Martín from high to very high elevations from June to August.

***Madeleinea nodo* BÁLINT & JOHNSON, 1995**

*Madeleinea nodo* BÁLINT & JOHNSON, 1995b: 6, pl. I, figs "M. nodo" (holotype wing dorsum, ventrum), AMNH holotype male, ECUADOR: Pichincha, Pululahua Loma los Monjas, 2600 m (examined).  
*Madeleinea* sp? BALINT M/S; D'ABRERA 1995: 1254, 1255 figs "M. ? sp. > (Ecuador)".



## MATERIAL EXAMINED (12 specimens)

ECUADOR – Carchi: Volcan Chiles, via Tufiño-Maldonado, 3500 m, 27.VIII.2004. (3 males); Tungurahua: Imbabura, cca. 900 m, X.2001. (2 males, female), Tungurahua volcano, Runtun, 2800 m, 22.I.2002. (4 males, 2 females).

## REMARKS

Known to occur exclusively in the Andes of Ecuador from moderate to high elevation throughout the year.

***Madeleinea pacis* (DRAUDT, 1921) BÁLINT, 1993**

*Itylos pacis* DRAUDT, 1921: 821, Pl. 144, rows l, m, figs “Pacis”; SMF lectotype male (designated by BÁLINT 1999b: 94): “Cuzco” (examined).

*Madeleinea pacis* (DRAUDT) BÁLINT 1993: 21.

*Madeleinea pacis* (DRAUDT); D’ABRERA 1995: 1254, 1255 figs “M. pacis”.

## MATERIAL EXAMINED (7 specimens)

PERU – Huánuco: Illich, Shigsha-Ocopata road, 2650 m, 18.VIII.2002. (2 males); Junín: San Pedro de Cajas, 3800 m, 24.I.2003. (male), Las Vegas, N 2 km Oroya-Junín Road, 3850 m, 16.VIII.2002.(4 males).

## REMARKS

Known to occur in the Andes of Peru, from high to very high elevations from January to February and August.

***Madeleinea tintarrona* BÁLINT & JOHNSON, 1995**

*Madeleinea tintarrona* BÁLINT & JOHNSON, 1995b: 13, pl. I., fig. “M. tintarrona” (holotype wing dorsum, ventrum); BMNH 265555 holotype male, PERU: La Oroya (examined).

*Madeleinea* ? sp., BALINT M/S; D’ABRERA 1995: 1254, 1255 figs “M. ? sp. (E. Peru)”.

## MATERIAL EXAMINED (10 males)

PERU – Junín: Las Vegas, 4100 m, 18.I.2003. (10 males).

## REMARKS

Known to occur exclusively in the Peruvian Andes, in the department Ayacucho, Huancavelica and Junín at high elevation from January and February.

***Paralycaeidides inconspicua* (DRAUDT, 1921) NABOKOV, 1945**

*Itylos inconspicua* DRAUDT, 1921: 822, pl. 144, row m, fig. “inconspicua”(syntype wing dorsum, ventrum); SMF syntype males, PERU: “Cuzco”.

*Paralycaeidides inconspicua* (DRAUDT) NABOKOV, 1945: 36.

*Paralycaeidides inconspicua* (DRAUDT); BÁLINT 1996: pl. K., figs 19 (“1” male dorsum), 22 (“4” male ventrum).

## MATERIAL EXAMINED (1 specimen)

PERU – Junín: San Pedro de Cajas, 3800 m, 24.I.2003. (male).

## REMARKS

Known to occur exclusively in the Andes of Peru, department Ayacucho, Cuzco and Junín at high elevation from January-February.

***Zizula cyna* (EDWARDS, 1881) CHAPMAN, 1910**

*Lycaena cyna* EDWARDS, 1881: 3, CM holotype male USA: "San Antonio, Bexar County, Texas" (colour images examined).

*Zizula cyna* (EDWARDS) CHAPMAN, 1910: 95.

*Zizula cyna* (EDWARDS); D'ABRERA 1995: 1253, figs "Z. cyna".

## MATERIAL EXAMINED (9 specimens)

COLOMBIA – Cauca: Tambito Forest. Res., La Paila, 22.IX.1996. (2 males).  
ECUADOR – Carchi: Etsemani, 1200 m, 29.VIII.2004. (4 males). VENEZUELA – Táchira: Alto Río Doradas, 600 m, III. 1992. (male). PERU – Loreto: Yurimaguas, II.1987. (2 females).

## REMARKS

Distributed in the entire Neotropical region from a sea level to the high elevations throughout the year.

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